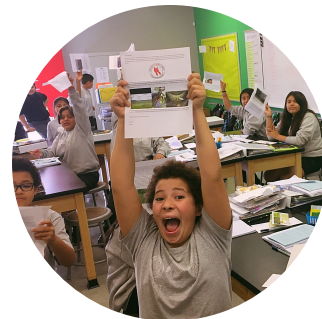


# Letters to a Pre-Scientist

*be a friend and an inspiration*



“Scientists are white men who wear lab coats and pipette chemicals,”

was the general consensus of the diverse students in founders Macon & Lucy's low-income schools in rural and urban NC when asked to describe a scientist. After working with 20+ teachers, they realized this stereotype is deeply embedded in society.

**THE PROBLEM:** Students in grades 5-10 from high poverty communities across America struggle to connect science to the real world.

## THE FACTS:

- 50% of Black & Latino students attend high poverty schools in America (where >75% of students qualify for free or reduced-price lunch). (1)
- Students attending high poverty schools perform 90 pts worse on science assessments than their highest income peers. (2)
- Students attending high poverty schools are significantly underrepresented in STEM fields. In 2015, Black & Latino students received <18% of STEM Bachelor's degrees. (3)

## THE NEED:

- Few STEM professionals work in low-income communities, meaning students in high poverty schools lack access to the range of professional role models available to their higher income peers (especially role models who look like the students).

*“Students often view scientists as people who are inaccessible. They see portrayals of them in the media, but they don't usually know any real scientist and--by extension--don't often see themselves in the role of being a scientist.” ~LPS Teacher*

Students with a bachelor's degree in a STEM field earn more than all others who hold Bachelor's degrees. (4) The availability of STEM jobs is projected to increase by 13% this decade. (5)

Without interventions that give low-income students access to scientist role models, they are excluded from the economic opportunities and career prospects STEM careers offer.

## OUR APPROACH:

Letters to a Pre-Scientist is a pen pal program that connects students in grades 5-10 in high poverty schools across America with scientist role models. Through four, snail mail letter exchanges throughout a school year, our program:

- Gains students access to a professional scientist mentor who encourages them to ask questions about college and STEM careers
- Builds a network of engaged scientists and “pre-scientists” who are redefining what it means to be a scientist in America.

Our mission is to empower all students to see themselves as future scientists by connecting students in high poverty communities with real scientists.

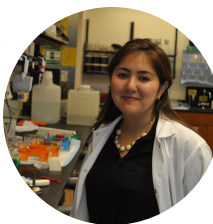
*We envision a day when all students have equitable access to science role models to increase diversity in STEM fields.*



## INITIAL IMPACT:

71% of students agree that having a pen pal helped them learn new science. (588 students)

70% of students report knowing as much or more about science careers after completing the program. (87 students)



“I enjoy telling students what life as a scientist is really like—as a kid, I had no exposure to this sort of thing, and that exposure would have made my field seem more welcoming and accessible.” ~LPS scientist

“I keep getting closer to wanting to become a scientist.”  
~LPS student



## GROWTH GOALS:

- ✓ 2010-11: program pilot: 1 school // rural North Carolina // 100 students
- ✓ 2017-18: 9 schools // 5 states // 650 students
- 2018-19: 25 schools // 5 states // 1.8k students // 10 field trips
- 2022-23: 500 schools // 15 states // 30k students // 100 field trips // 15 university partnerships

\*A small team of volunteers has remotely managed and expanded LPS for the past 8 years.

(1) [https://nces.ed.gov/programs/coe/indicator\\_clb.asp](https://nces.ed.gov/programs/coe/indicator_clb.asp)  
(2) [https://nces.ed.gov/timss/timss2015/timss2015\\_table42.asp](https://nces.ed.gov/timss/timss2015/timss2015_table42.asp)  
(3) [https://nces.ed.gov/programs/digest/d16/tables/dt16\\_318.45.asp?current=yes](https://nces.ed.gov/programs/digest/d16/tables/dt16_318.45.asp?current=yes)  
(4) <https://www.asce.org/magazine/20151006-new-study-shows-stem-education-pays-off-over-a-lifetime/>  
(5) [https://www.huffingtonpost.com/donna-randall/increasing-diversity-in-t\\_b\\_5333264.html](https://www.huffingtonpost.com/donna-randall/increasing-diversity-in-t_b_5333264.html)